

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460

MAY 2 6 1993

OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM:

Review of generic data submission to Chlorpyrifos: SUBJECT:

support reregistration

EPA IDENTIFICATION NUMBERS:

Caswell No.:

P.C. Code: 059101

D.P. Barcode: D188148, D188791 Submission: S435336, S436324

FROM:

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THRU:

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DowElanco

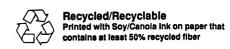
Chemical:

Chlorpyrifos (Dursban)

Action Requested: Review range-finding and definitive Neurotoxicity Screening Battery (§81-8) toxicology studies in rat to support reregistration.

The following studies were reviewed: Chlorpyrifos: Acute neurotoxicity study in Fischer 344 rats (MRID No.: 426691-01) and Chlorpyrifos: Acute oral toxicity (range-finding) study in Fischer 344 rats (MRID No.: 424954-04)

Male and female Fischer 344 rats were treated once, by RESULTS: oral gavage, with test compound at doses of 0, 10, 50, or 100



mg/kg and evaluated for neurotoxicity on Days 1 (at the peak time of toxicity, approximately 6 hours after dosing), 8 and 15. Systemic toxicity consisted of decreased body weights of animals in the 50 and 100 mg/kg groups. Neurotoxic effects consisted of decreased motor activity on Day 1 through Day 8 (females only). Significant FOB changes were limited to high dose females, of which six out of ten could not perform the landing hind leg splay on Day 1 of the study. Grip performance on Day 1 revealed a possible treatment-related decrease with increasing dose. Neuropathological examinations did not reveal any treatment-related effects.

2. <u>Conclusions</u>: The systemic and neurotoxic NOEL and LOEL are as follows:

NOEL LOEL

Male and Female 10 mg/kg (LDT) 50 mg/kg (MDT)

LOEL is based on decreases in both body weight and motor activity and increased incidence of adverse clinical signs consistent with organophosphorus intoxication.

CLASSIFICATION: core - supplementary; study did not include positive controls.